

I CLAIM:

1. An apparatus for removing the tips from tablet punches comprising:  
a circular turret for supporting a plurality of punches for rotational movement about a substantially vertical axis, said turret having a plurality of substantially vertically aligned holes around the periphery thereof extending from the upper portion of said turret to the lower portion of said turret and wherein each of said holes is adapted to support a punch in a substantially vertical orientation with the tips of said punches being exposed below the lower portion of said turret;

a cutting wheel positioned below said turret and being located in a position in the path of said tips of said punches as said turret rotates so as to be adapted to remove said tips;

means for rotating said turret at a relatively low speed;

means for rotating said cutting wheel at a relatively high speed;

nozzle means for spraying a cooling liquid at the position where said cutting wheel engages the tips of the punches in order to cool the same, and

a substantially watertight tank surrounding said cutting wheel, said nozzle and the lower portion of said turret for collecting the liquid and metal grindings from said nozzle and from the cutting of said tips by said cutting wheel.

2. An apparatus for removing the tips from tablet punches as claimed in Claim 1 wherein said tank includes an upper wall including a circular aperture therein, said turret extending through said aperture so that said upper portion of said turret is above said upper wall and said lower portion of said turret is below said upper wall.

3. An apparatus for removing the tips from tablet punches as claimed in Claim 2 wherein said upper wall includes a hinged door to allow access to the interior of said tank.

4. An apparatus for removing the tips from tablet punches as claimed in Claim 1 wherein the upper surface of said turret includes an elongated opening therein adjacent each hole to enable the heads of said punches to be grasped and manually removed.

5. An apparatus for removing the tips from tablet punches as claimed in Claim 1 wherein said cutting wheel is mounted for rotation about an axis which is at a slight angle from the vertical.

6. An apparatus for removing the tips from tablet punches as claimed in Claim 5 wherein said angle is from approximately 3 to approximately 5 degrees from the vertical.

7. An apparatus for removing the tips from tablet punches comprising:  
a circular turret for supporting a plurality of punches for rotational movement about a substantially vertical axis, said turret having an upper surface and a plurality of substantially vertically aligned holes around the periphery thereof extending from the upper surface in the upper portion of said turret to the lower portion of said turret and wherein each of said holes is adapted to support a punch in a substantially vertical orientation with the heads of said punches being exposed above said upper portion of said turret and the tips of said punches being exposed below the lower portion of said turret;

a cutting wheel positioned below said turret and being located in a position in the path of said tips of said punches as said turret rotates so as to be adapted to remove said tips;

means for rotating said turret at a relatively low speed;

means for rotating said cutting wheel at a relatively high speed, and

circular shim means adapted to be placed on the upper surface of said turret before said punches are inserted into said holes for adjusting the height of said tips of said punches below said turret.

8. An apparatus for removing the tips from tablet punches as claimed in Claim 7 further including nozzle means for spraying a cooling fluid at the position where said cutting wheel engages the tips of the punches in order to cool the same.

9. An apparatus for removing the tips from tablet punches as claimed in Claim 8 wherein said cooling fluid is a liquid.

10. An apparatus for removing the tips from tablet punches as claimed in Claim 7 wherein the upper surface of said turret includes an elongated opening therein adjacent each hole to enable the heads of said punches to be grasped and manually removed.

11. An apparatus for removing the tips from tablet punches as claimed in Claim 7 wherein said cutting wheel is mounted for rotation about an axis which is at a slight angle from the vertical.

12. An apparatus for removing the tips from tablet punches as claimed in Claim 11 wherein said angle is from approximately 3 to approximately 5 degrees from the vertical.